

REMARKS

Status of the claims

Claims 1-3, 6-18, 20-24, 27 and 57-86, as shown in the response filed on October 26, 2004, were previously pending in the application and claims 57, 60 and 62-71 were under consideration. By virtue of the present response, claims 1-3, 6-18, 20-24, 27, 58-62, 65, 67 and 72-86 are canceled, without prejudice or disclaimer. Claims 57, 63 and 68 are amended, and new claims 87-90 have been added.

Support for the amendments to claim 57 is found, for example, at page 4, lines 9-12, at page 13, lines 11-19 and in original claim 62. Support for new claim 87 is found, for example, at page 4, lines 9-11, at page 13, lines 12-14 and at page 14, lines 8-14. Support for new claim 88 is found, for example, at page 4, lines 9-11, at page 13, lines 12-14 and at page 13, line 20 through page 14, line 7. Support for new claim 89 is found, for example, at page 4, lines 11-12, and at page 13, lines 20-29. Support for new claim 90 is found, for example, at page 14, lines 4-6.

New claims 87-90 depend from claim 57 and therefore correspond to elected Group 6 set forth in the Restriction Requirement dated April 7, 2004. Accordingly, Claims 57, 63, 64, 66, 68-71 and 87-90 are pending and under consideration. It is also noted that all pending claims correspond to elected Group 6.

Interview

A telephone interview between the undersigned and Examiner Wax was conducted on December 16, 2005. The Zhang *et al* article (see below) was discussed, as was possible claim language. Agreement was not reached.

35 U.S.C. § 102(e)

Cox et al.

The rejection of claims 57, 62-68, 70 and 71 over Cox *et al.*, U.S. Patent No. 6,534,261, has been maintained. (Office Action, paragraphs 2 and 6) In response, claim 57 has been amended to recite a region of cellular chromatin that is sensitive to a probe of chromatin structure. As set forth in Applicants' previous response, Cox contains no

disclosure that his zinc finger proteins bind to regions of cellular chromatin that are sensitive to probes of chromatin structure.

In addition, Applicants attach a copy of Zhang *et al.* (2000) *J. Biol. Chem.* 275:33850-33860 as Exhibit A to this Response. Zhang *et al.* disclose a number of zinc finger proteins (EPOZFP-862a, EPOZFP-862b, and EPOZFP-862c; *see* Table I of Zhang *et al.*) designed to bind to a target site located 862 base pairs upstream of the transcription start site of the erythropoietin (EPO) gene. Figure 4 of Zhang shows regulation of an endogenous EPO gene, in HEK 293 cells, by the EPOZFP-862c protein. Figure 6 of Zhang (and accompanying text at page 33857, paragraph bridging first and second columns) shows that the -862 region of the EPO gene, to which the EPOZFP-862 protein binds, is not sensitive to DNase I in HEK 293 cells (see also page 33853, first column, 2nd through 4th lines from the bottom of the column, indicating that the analysis shown in Figure 6 was conducted using nuclei from HEK293 cells). Despite the fact that the EPOZFP-862c target site is not DNase I-sensitive, Figure 7 of Zhang provides direct evidence that the EPOZFP-862c protein nonetheless binds to this site in cellular chromatin. Accordingly, the EPOZFP-862c protein regulates expression of the EPO gene by binding to a region of the gene that is not sensitive to a probe of chromatin structure.

Thus, in light of Zhang *et al.*, sensitivity to a probe of chromatin structure is not an inherent property of a binding site in cellular chromatin.¹ It follows that Cox's disclosure of a protein regulating expression of an endogenous VEGF gene does not inherently disclose binding of his proteins to regions of cellular chromatin that are sensitive to probes of chromatin structure. *See*, for example, *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). Accordingly, the presently-pending claims are novel with respect to Cox and Applicants request that the rejection be withdrawn.

Cox *et al.* in view of Neely *et al.*

Inasmuch as claim 60 has been canceled, this rejection is moot.

¹ See also Wong *et al.* (1997) *EMBO J.* 16:7130-7145 and Cirillo *et al.* (1998) *EMBO J.* 17:244-254 (copies of which were attached to the Response dated July 6, 2005).

CONCLUSION

For the reasons set forth herein, Applicants believe that all pending claims are novel and non-obvious and are therefore in condition for allowance. Since all non-elected claims have been canceled, Applicants look forward to notification of allowance.

Respectfully submitted,

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